

Institutional Effectiveness Through Strategic Analytics

**Tim Beckett, Higher Education
Solutions Manager
John Sulka, Higher Education Solutions
Architect**

**TAIR - Tuesday, February 12, 2013
Session E7, Ivy 2, 2:15 to 3:05 PM**

What We Want to Share With You

- Information delivery challenges we've observed in higher education
- Information Builders' customer examples of solutions to those challenges

Challenges Facing You Today

- Our political environment demands results as a precursor to public investment.
- Improving efficiency is demanded for today's fiscal realities.
- The need for quality is ever-present and involves a clear focus on enrollment, retention, and student outcomes.



Accountability – A Culture of Evidence

- The ability to share best practices and leverage successes from other higher education institutions can truly address many of your challenges.
- Transparency and accountability –
 - Longitudinal performance to board, state, and public
- Empowering end user access to data for decision-making in real-time is critical to achieving efficiency and effectiveness of the organization



- My Plan to Fix the World's Biggest Problems

“From the fight against polio to fixing education, what's missing is often good measurement and a commitment to follow the data. We can do better. We have the tools at hand.”



Bottom Line

- Your core mission, new requirements from government place greater demands on your institution than ever before
- Both public and private institutions are being encouraged to reconsider their missions
- Strategies for improvement need to come from higher education community



Impact on Staff

- Academic program coordinator shared:
 - She does academic advising, working one-on-one with students, & working with student schedules.
 - To find most likely candidates for the Engineering Honors program, she would pull transcripts, checking qualifications for scholarships – took 2 weeks of effort
- An institutional research department of 5 people spends a full month each year to create its fact book -- labor that must be re-started annually.
 - Manually, Excel-based, error-prone
- The provost of Princeton University testified
 - Renewing accreditation ran over \$1 million, hundreds of hours of staff time.
- Large community college wanted greater accountability, and an information interface suitable for the board
 - Were planning to invest 3 years into creating a data warehouse...
 - And then **begin** building the dashboard



Addressing the Problem

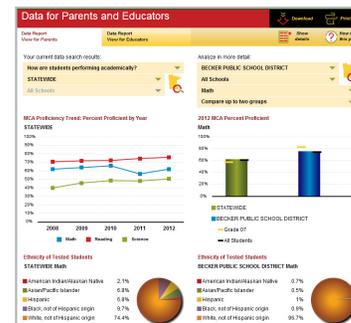
- Use of academic dashboards allow the board to make the best use of their funds through strategic, data-driven decisions.
- Use of self-service analytics to functional units and the public increases efficiency, reduces dependence on IT



Why Us?

Information Builders is the only solution provider that brings it all together. With intelligence, integration, and integrity offerings to help higher educational institutions by:

- Helping You Show **Accountability Toward Your Strategic Goals** with boardroom-quality dashboards & a comprehensive performance management framework.
- Providing Reporting & Advanced Analytics, that help empower **Smarter Decision-Making** across all levels & functions.

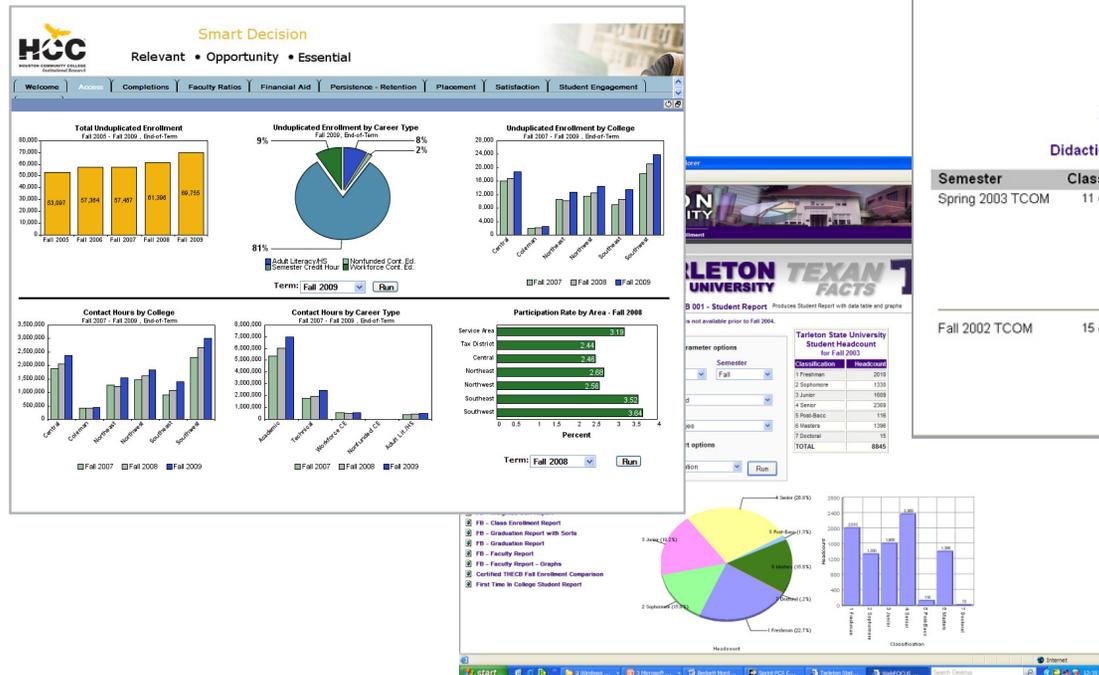


Admissions Applications

PRIMARY_ETHNICITY_DESC	PRIMARY_ETHNICITY	GENDER	GENDER_DESC	LATEST_DECISION					CPL
				Count of Applications					
NAI	NAI	NAI	NAI	1	0	0	0	0	0
American Indian/Alaskan Native	I	F	Female	0	0	0	0	0	1
		M	Male	2	1	0	0	0	0
Asian or Pacific Islander	A	F	Female	0	0	0	0	0	0
		M	Male	0	0	0	0	0	0
Black, Not Hispanic	B	NI	Not Reported	1	0	0	0	0	0
		F	Female	0	0	0	0	0	0
		M	Male	0	0	0	0	0	0
Hispanic	H	F	Female	0	0	0	0	0	0
		M	Male	0	0	0	0	0	0
No Indication/Not Reported	X	NI	Not Reported	1	0	0	0	0	0
		F	Female	0	0	0	0	0	0
		M	Male	138	0	0	0	0	10
Non-Resident Alien	O	NI	Not Reported	1	0	0	0	0	0
		F	Female	2	0	0	0	0	0
		M	Male	1	0	0	0	0	0
White, Not Hispanic	W	F	Female	10	10	2	25	21	21
		M	Male	10	0	0	0	0	0
		NI	Not Reported	0	0	0	0	0	0
Total				1026	66	2	27	116	

Why Us?

- Providing a scalable architecture for deploying wide-scale, **Public-Facing Institutional Intelligence** applications, such as interactive fact books.
- Solutions for unifying data from diverse sources, with data integrity, to achieve a **360-degree View of Students**, teachers, and schools



Academic Performance Detail

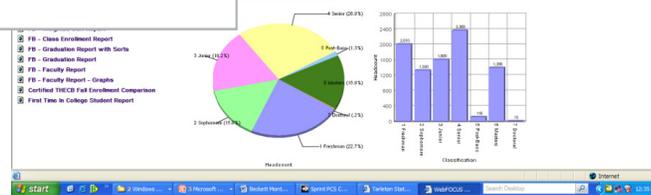
King, Stephanie



[View Admission Data](#) Jump to: This Page

Didactic Performance By Semester

Semester	Class Rank	Course Name	Score
Spring 2003 TCOM	11 of 104	Osteopathic Manipulative Med 4	97
		Nervous System 2	90
		Hematopoietic System 2	97
		Reproductive System 2	92
		Gastrointestinal System 2	95
Fall 2002 TCOM	15 of 110	Clinical Medicine 4	99
		Osteopathic Manip Medicine 3	92
		Fundamentals of Treatment	93
		Genitourinary System 2	93
		Cardiovascular System 2	92
		Respiratory System 2	93
		Musculoskeletal/Skin System 2	98



Examples of Customers We're Helping

Provide Institutional Accountability

Houston Community College, an Achieving the Dream Leader College, needed to collect performance data, analyze it, and present it in a way that encourages fact-based decision-making.

Strategy: Give administrators, staff, and the board power to drill down into the data through graphical dashboards.

Result: The new system helps the college document and evaluate decisions, measure enrollment, track student outcomes. It also eases communication, helping the college to make tough budgetary decisions based on broadly accepted performance indicators.

— 2011 —
THE COMPUTERWORLD
HONORS PROGRAM
— LAUREATE —



HOUSTON COMMUNITY COLLEGE

Let's go to HCC's Academic Dashboard now!

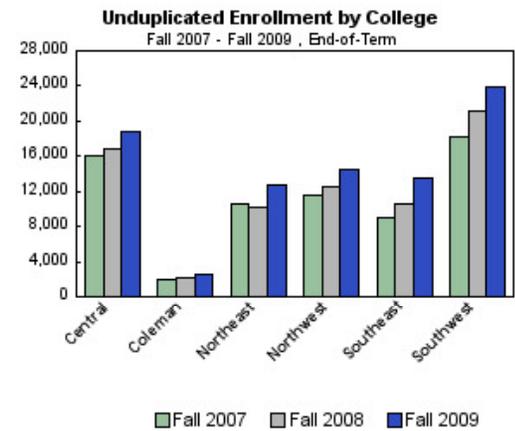
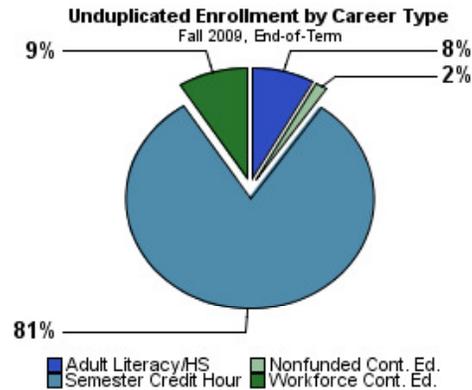
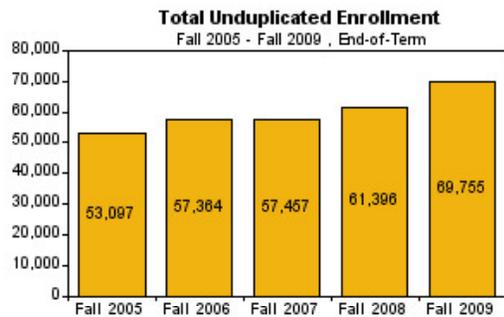


Smart Decision

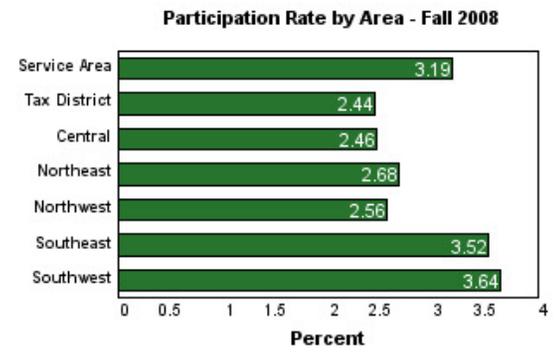
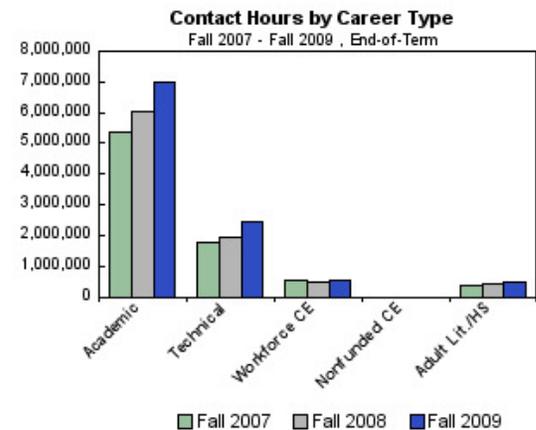
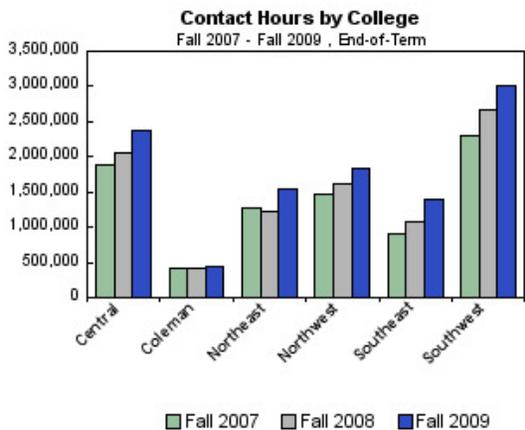
Relevant • Opportunity • Essential



[Welcome](#) |
 [Access](#) |
 [Completions](#) |
 [Faculty Ratios](#) |
 [Financial Aid](#) |
 [Persistence - Retention](#) |
 [Placement](#) |
 [Satisfaction](#) |
 [Student Engagement](#)



Term: **Fall 2009**



Term: **Fall 2008**

On the Intranet

The screenshot shows a web browser window with the address bar displaying "Institutional Research" and a user profile for "Good Morning Martha Oburn". The browser's address bar also shows navigation icons for home, RSS, email, and printing, along with menu items for "Page", "Safety", "Tools", and a help icon. The website's main navigation bar includes links for HOME, COLLEGES, POLICIES, PROCEDURES, FORMS, COUNCILS & COMMITTEES, and SACS. The main content area features the "Institutional Research" title with a breadcrumb trail "Home > Institutional Research". Below this is a secondary navigation bar with links for DECISION SUPPORT SYSTEM, SURVEYS & STUDIES, EXTERNAL REPORTING, and ABOUT INSTITUTIONAL RESEARCH. The content is organized into three columns: "News and Alerts" (showing "No News or Alerts at This Time"), "Instant Links" (listing "Daily Enrollment Reports", "Enrollment Management Resources", "Program Review Resources", "SEOI Resources", and "Interactive Web Reports"), and "Ask IR" (listing "Service Request Form" and "IR Blog"). The footer contains "Terms of Use | Privacy Statement" on the left and "© 2011 Houston Community College. All rights reserved." on the right.

Institutional Research

Good Morning Martha Oburn

HOME COLLEGES POLICIES PROCEDURES FORMS COUNCILS & COMMITTEES SACS

Institutional Research

Home > Institutional Research

DECISION SUPPORT SYSTEM | SURVEYS & STUDIES | EXTERNAL REPORTING | ABOUT INSTITUTIONAL RESEARCH

News and Alerts	Instant Links	Ask IR
No News or Alerts at This Time	Daily Enrollment Reports	Service Request Form
	Enrollment Management Resources	IR Blog
	Program Review Resources	
	SEOI Resources	
	Interactive Web Reports	

Terms of Use | Privacy Statement

© 2011 Houston Community College. All rights reserved.

Supporting Instruction

myHCC Program Review



HCCfacultyfacts

Class Size | Contact Hours | Faculty Ratios | Seat Count (Enrollment) | SEOI

Class Size

Class Size

Select Vertical Sort

Sort1: Term | Sort2: No Selection | Sort3: No Selection | Sort4: No Selection

Sort5: No Selection | Sort6: No Selection | Sort7: No Selection

Select Horizontal Sort

Sort8: No Selection | Term | College

Select Filters

Dual Cr / Distance Ed / On Campus

- No Selection
- Dual Credit Only
- Distance Education Only
- On Campus Only

Term

- ALL
- Fall 2010
- Summer 2010
- Spring 2010
- Fall 2009
- Summer 2009

College

- ALL
- Central College
- Coleman-Health Science
- Northeast College
- Northwest College
- Southeast College

Location

- ALL
- Alief Campus
- Alief Continuing Edu.
- Automotive Technology Ce
- Booker T. Washington HS

Program

- ALL
- Accounting
- Agricultural Science, Academ
- Air Conditioning/Refrigeration
- Anthropology
- Arranging Comp. & Productio

Subject

- ALL
- ABDR
- ACCT
- ACNT
- AERM
- AGMG

Catalog Number

- ALL
- 0100
- 0101
- 0102
- 0106
- 0108

Instruction Mode

- ALL
- DVD
- Hybrid
- In Person
- Internet
- Videocassette

Report Sub-Heading (optional)

Note: Referencing selected filters is recommended

Select Output Format

- HTML PDF Excel

Run Report

Faculty Ratio

Faculty Ratios

Faculty Ratio Parameter Driven Reports

By Select Vertical Sort : **Across** Select Horizontal Sort :

Sort1 Term	Sort2 Subject	Sort3 No Selection	Sort4 No Selection	Sort8 No Selection
Sort5 No Selection	Sort6 No Selection	Sort7 No Selection		Term
				Career
				College

Select Filters :

Distance Education/Dual Credit <input type="radio"/> Distance Education only <input type="radio"/> Dual Credit only <input checked="" type="radio"/> No Selection	Term ALL Fall 2010 Quarter IV 2010 Summer 2010 Spring 2010	Career ALL AHS CEU NCR SCH	College ALL Central College Coleman-Health Science Northeast College Northwest College
Location ALL Alief Campus Alief Continuing Edu. Automotive Technology Center	Course Name ALL Accounting Air Conditioning/Refrigeration Anthropology Arranging Comp. & Production	Subject ALL ABDR ACCT ACNT AERM	Course Number ALL 0100 0101 0102 0106

Report Title :
Heading1: **HCC Faculty Ratio Report**
Heading2: (optional)

Select Output Format :
 HTML PDF EXCEL

Run Report

Faculty Ratio

HCC Faculty Ratio Report

TERM	SUBJECT	# FT	% FT	# FOL	% FOL	# PT	% PT	Total # of Sections
Fall 2010	ABDR	9	100.0	0	.0	0	.0	9
	ACCT	41	55.4	4	5.4	29	39.2	74
	ACNT	41	45.6	3	3.3	46	51.1	90
	AERM	0	.0	0	.0	2	100.0	2
	ANTH	14	51.9	1	3.7	12	44.4	27
	ARAB	0	.0	0	.0	2	100.0	2
	ARCE	0	.0	0	.0	3	100.0	3
	ARTC	21	51.2	0	.0	20	48.8	41
	ARTS	53	24.9	1	.5	159	74.6	213
	ARTV	1	33.3	0	.0	2	66.7	3
	ASTR	9	64.3	3	21.4	2	14.3	14
	AUMT	36	85.7	0	.0	6	14.3	42
	BARB	5	71.4	0	.0	2	28.6	7
	BCIS	28	45.2	3	4.8	31	50.0	62
	BIOL	146	35.7	52	12.7	211	51.6	409
	BIOM	0	.0	0	.0	1	100.0	1
	BITC	3	60.0	0	.0	2	40.0	5
	BMGT	20	55.6	2	5.6	14	38.9	36
	BNKG	4	36.4	2	18.2	5	45.5	11
	BUSG	29	49.2	2	3.4	28	47.5	59
	CDEC	4	40.0	2	20.0	4	40.0	10
	CETT	8	72.7	0	.0	3	27.3	11
	CHEF	12	50.0	5	20.8	7	29.2	24
	CHEM	50	31.6	22	13.9	86	54.4	158
	CHIN	0	.0	0	.0	3	100.0	3
	CHLT	0	.0	0	.0	2	100.0	2
	CJLE	7	100.0	0	.0	0	.0	7
	CJSA	1	100.0	0	.0	0	.0	1

Average class size

Class Size

Class Size

Parameter Driven Report

By Select Vertical Sort

Sort1 Term	Sort2 Subject	Sort3 Catalog Number	Sort4 No Selection
Sort5 No Selection	Sort6 No Selection	Sort7 No Selection	

Across Select Horizontal Sort

Sort8 No Selection

Select Filters

Dual Cr / Distance Ed / On Campus <input type="radio"/> No Selection <input type="radio"/> Dual Credit Only <input type="radio"/> Distance Education Only <input checked="" type="radio"/> On Campus Only	Term ALL Fall 2010 Summer 2010 Spring 2010 Fall 2009 Summer 2009	College ALL Central College Coleman-Health Science Northeast College Northwest College Southeast College	Location ALL Alief Campus Alief Continuing Edu. Automotive Technology Ce Booker T. Washington HS
Program ALL Accounting Air Conditioning/Refrigeration Anthropology Arranging Comp. & Production Art	Subject ALL ABDR ACCT ACNT AERM ANTH	Catalog Number ALL 0100 0101 0102 0106 0108	Instruction Mode ALL DVD Hybrid In Person Internet Web Enhanced

Report Sub-Title (optional)

Select Output Format

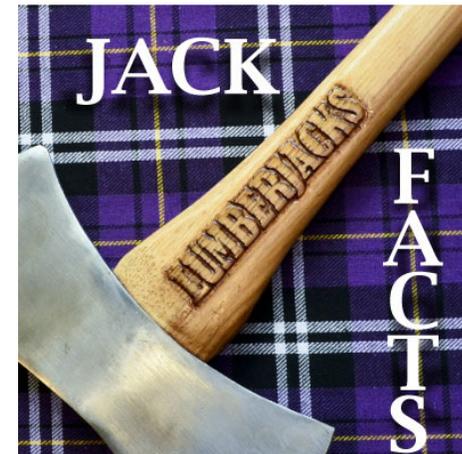
HTML PDF Excel

Run Report

More Information in One Location

Stephen F. Austin State University wanted to use a dashboard instead of the old Fact Book format.

- Users can locate all the elements of data that were available in the traditional Fact Book with more functionality
- More semesters of data are available for analysis in one location
- Parameters allow the user to focus on a specific area of interest if desired.





Let's go to SFA's Dashboard now!

SFA Home

Institutional Research

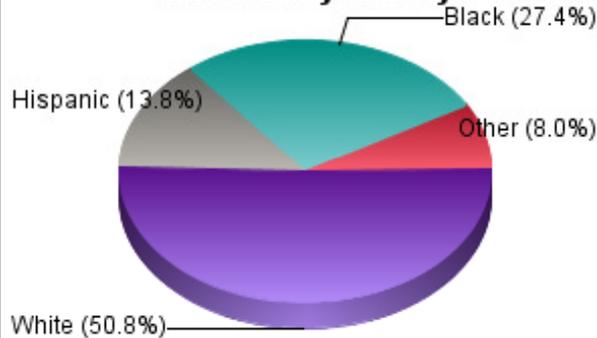
Welcome | **Headcount** | Credit Hours | Degrees | Faculty | FAQ

Level: Undergrad | Course Load: Full-time | Group: ALL | College: Business | Unit: Mgmt, Mktg | Degree Level: Bachelor | Degree: BBA | Major: ALL | Term/Year: Spring 2013

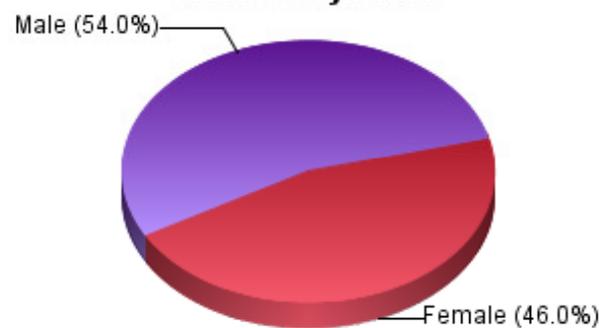
Click any chart for more detailed information. Avoid using the back button for navigation.

Submit | Bookmark | Print

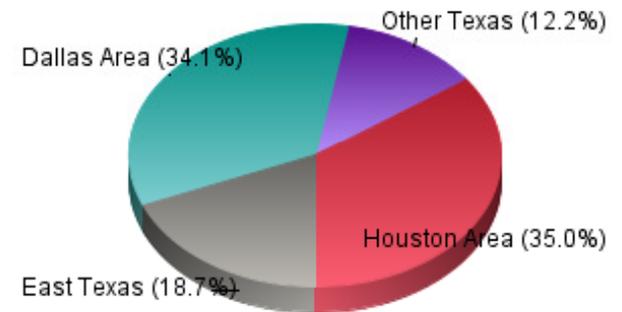
Headcount by Ethnicity



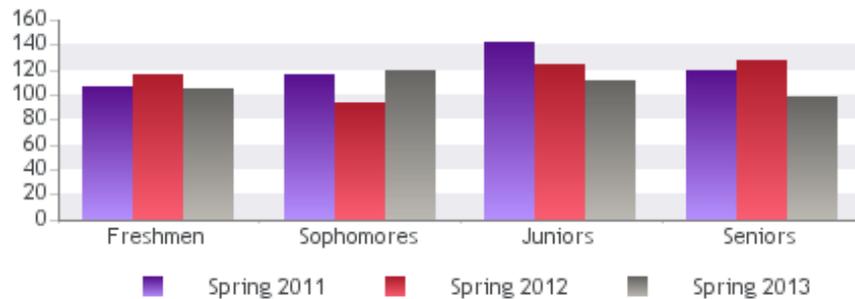
Headcount by Gender



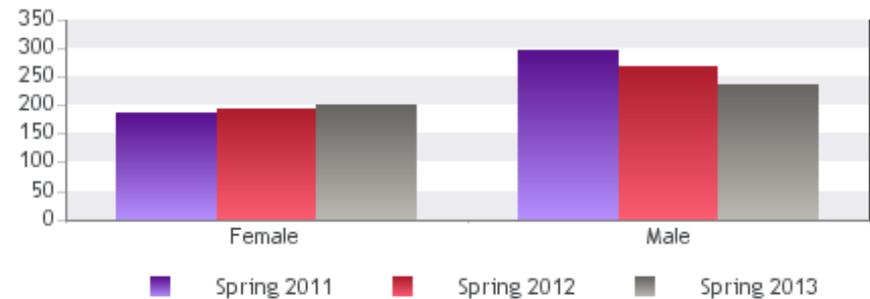
Headcount by Texas Origin



Headcount by Classification and Term



Headcount by Major and Gender



Closing Reporting Gaps

- **Texas Higher Education Coordinating Board** needed to
 - Increase operational efficiency
 - Improve the monitoring of key metrics and milestones
 - Enhance communication with the public
- **Result:** By eliminating cumbersome manual reporting processes and printed reports, and making information instantly available to users inside and outside the agency
 - THECB has the insight it needs to meet its goals as well as to increase visibility and accountability.



Regional and District Accountability

Home | THECB Main Website

About Our Data | About THECB |

Contact Us

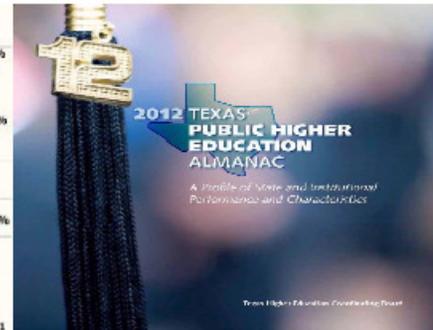
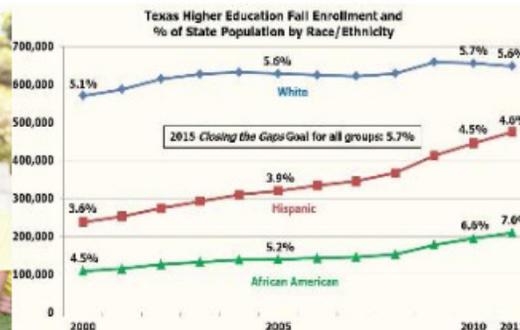
T ★ E ★ X ★ A ★ S

HIGHER EDUCATION DATA

Overview (Quick Links) | External Data Resources | Online Applications | Higher Education Topics | High School to College (P-16) | Reporting

to THECB | A-Z Index

- Policymakers**
 Accountability, almanac, financials...
- Parents, Students & K-12 Educators**
 Online Resume, H.S. to college stats...
- Media**
 Overview, Almanac, Press Releases...
- Institutions and Researchers**
 Reporting data, statistics...
- Career and Workforce Educators**
 Perkins, WECM, Workforce Topics...



Latest News

- 02/06/2013 [Data Resources for LBB Measures](#)
- 02/04/2013 [Online Institutional Resumes: 2013 Update](#)
- 01/25/2013 [Enrollment Forecast 2013-2020 for Texas Colleges and Universities](#)
- 01/25/2013 [Texas Higher Education](#)

Overview (Quick Links)	Online Applications	Higher Education Topics	High School to College (P-16)
Closing the Gaps Closing the Gaps Dashboard Data Resources Overview Degrees - Statewide Enrollment - Statewide Higher Ed Almanac Higher Ed Locator Map (HELM) List of Institutions Media Advisories Reports and Publications Texas Higher Ed Facts More...	Accountability Community College Annual Reporting Tool (CARAT) Course and Program Inventories Facilities Inventory Online Institutional Resumes Profile Reports (PREP) Regional Portal More...	<div style="background-color: #008000; color: white; padding: 2px;">>>>Participation</div> Applicants/Acceptance/Enrollment Developmental Ed Data (TSI) Developmental Ed Survey (DEPS) Distance Ed Data Enrollment Forecast Student Migration Report Texas Higher Ed Enrollments More... <div style="background-color: #008000; color: white; padding: 2px;">>>>Success</div> Annual Licensure Report Gainful Employment - Placement Rate Graduation Rates	7th Grade Cohorts 7th Grade Cohorts Dashboard Dual Credit Data HS Grads Enrolled in Higher Ed HS Grads GPA in Higher Ed HS Grads Higher Ed Outcomes HS Grads Higher Ed Preparation (TSI) <div style="border: 2px solid blue; border-radius: 50%; padding: 5px; display: inline-block;"> Tracking Postsecondary Outcomes Dashboard </div> More... <div style="background-color: #008000; color: white; padding: 2px;">Reporting to THECB</div> CBM Reporting Status CBM Reporting Manuals CIP Codes
External Data Resources	College for all Texans		

Welcome

Enrollment

Persistence

College Readiness

Compare Regions

Compare Districts

Across Years

Enrollment

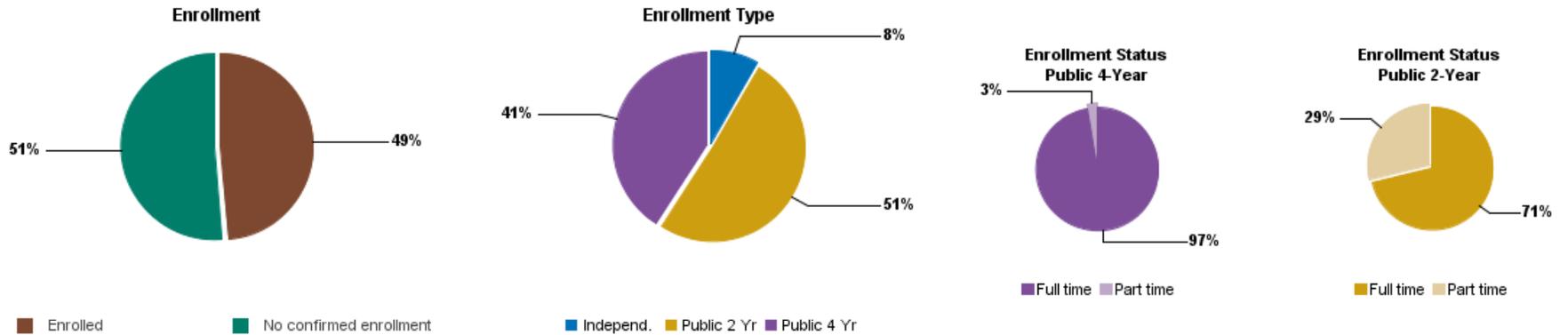
HS Graduation Year
2004

Region
All Regions

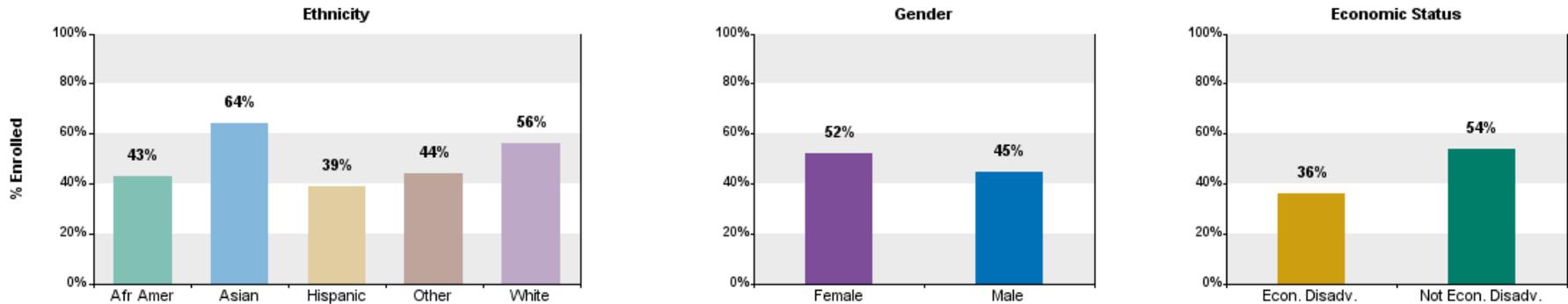
District
All Districts

Run

Percentage of high school graduates that enrolled in Texas postsecondary education by fall following high school graduation



Percentage of high school graduates that enrolled in Texas postsecondary education by demographic subgroups



12 Step Program

1. Envision a future
2. Get support from the top
3. Set priorities
4. Have a plan
5. Hire great people
6. Develop partnerships
7. Use the right tools
8. Accept help where needed
9. Keep on task
10. Monitor progress
11. Celebrate successes along the way
12. Decide what to do next

1. Envision a future

Decision support system is a way to model data and make quality decisions based upon it.



Key Questions

- Who makes decisions
- What decisions are made
- What information is needed
- How is it organized
- When is it needed



2. Get support from the top



the strategic plan
for our future

relevance & opportunity: a strategic plan essential to our future | 2008 - 2011

HCC's 2008-11 Strategic Plan

Goal 6—Accountability
and Strategic Decision-
making

**Develop an institutional
dashboard to
document and
evaluate the results of
decisions.**

- General Information about HCC
- 2.8 - Faculty
- 3.3.1.1 - IE Instructional Programs

3. Set priorities

Phased implementation

Phase 1: Academic Dashboard (2009-10)

Phase 2: Program Review (2010-11)

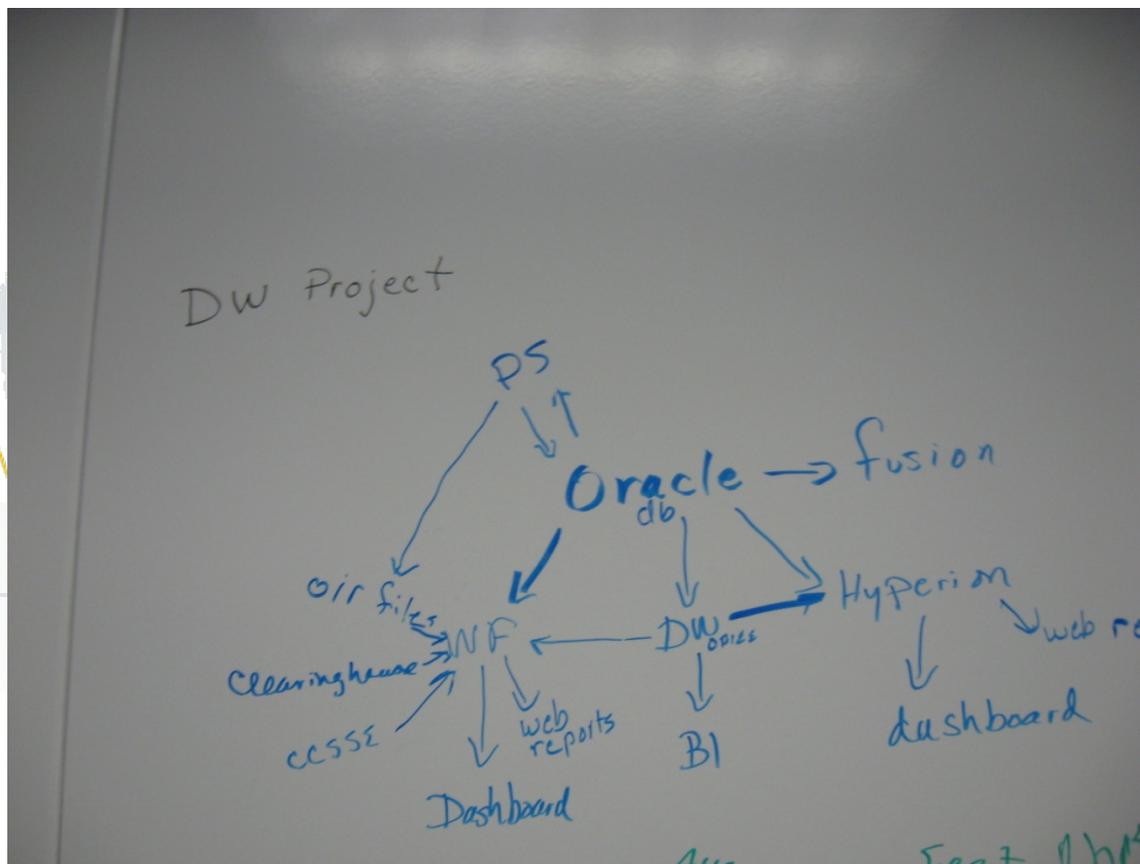
Phase 3: Integration with HCC Intranet (2011)

Phase 4: 2012 Strategic Plan (2012)

Phase 5: QEP dashboard (2012-13)

4. Have a plan





Office Whiteboard

5. Hire great people



6. Develop partnerships

External

- Information Builders

Internal

- Decisions makers
- Stakeholders
- IR staff
- IT



7. Use the right tools

WebFOCUS

8. Accept help where needed

A word about consultants.....

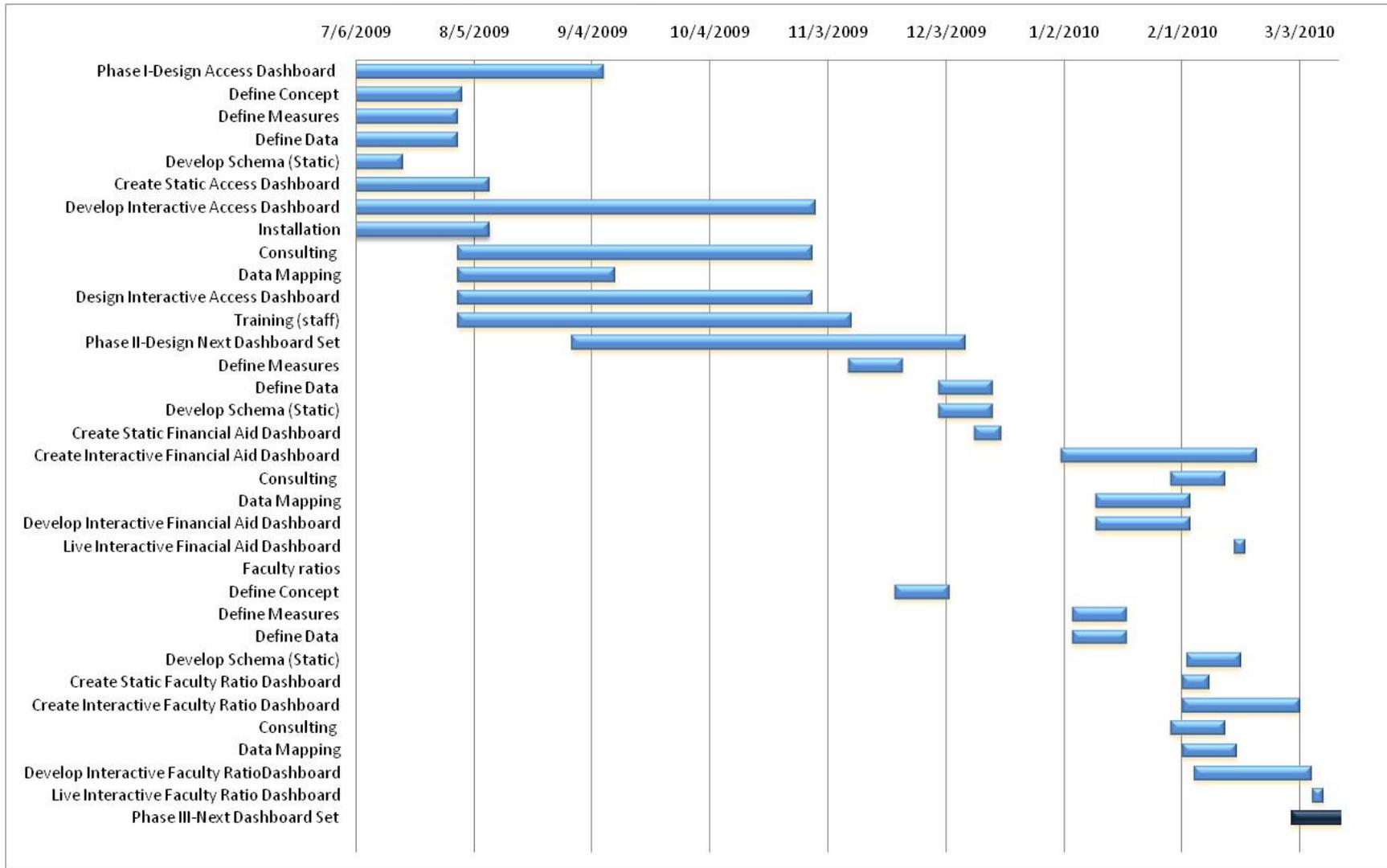


...and training

Information
Builders

**Information
Builders**

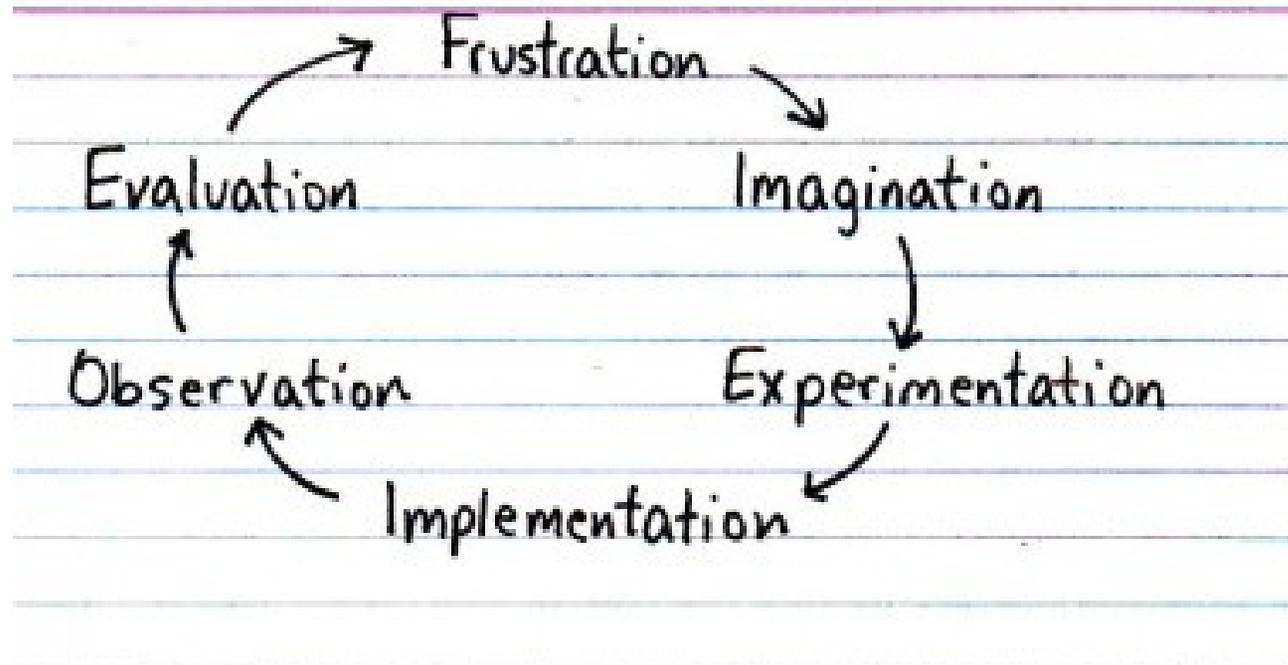
9. Keep on task



10. Monitor progress

How to get unstuck.

Posted on April 14, 2010 by Jessica Hagy



11. Celebrate successes along the way



Public Facing Websites

- *Houston Community College* - www.hccs.edu/hccs/at-a-glance/district-offices/institutional-research/academic-dashboard/academic-dashboard
- *Tarleton State University* - <http://www.tarleton.edu/institutionalresearch>
 - Click on “Texan Facts”
- *Texas A&M University Commerce*
 - <http://www.tamu-commerce.edu/approot/public/irfactbook/>
- *Texas Higher Education Coordinating Board*
 - <http://www.txhighereddata.org/>
 - Link to Tracking Postsecondary Outcomes Dashboard is on the right, 8th entry under High School to College (p-16).
- *Stephen F. Austin State University*
 - http://jackfacts.sfasu.edu/ibi_apps/bid/ac_mpv

Information Builders

Information Management in Higher Education

Information
Builders

track persistence in graphs

financial analysis

alumni on a map

Intuitive interface for functional users

academic dashboards

mobile

student outcomes

institutional

consistent definition of a student

comparative enrollment

intelligence

donation trends

applicants on a map

tracking transfers

culture of evidence

predictive analytics

advancement

longitudinal studies

retention

streamline accreditation

graduation rates

admissions

analysis

analysis

data-driven decisions cohort tracking

real-time data integration

of state

gateway course completion

faculty ratios

and
IPEDS

student success

Key Performance Indicators

data

360 degree view of students

budget tracking

fact book

Scorecards for accountability

semester credit hours

institutional research

Integration with Banner, Colleague, Peoplesoft, SAP, etc.

visual analytics of students enrolled in development courses

financial aid

awards

Integration with Banner, Colleague, Peoplesoft, SAP, etc.

Information Builders In Higher Education

Why Us?



Information Builders' intelligence, integration, & integrity solutions help higher education institutions by:

- Helping You Show **Accountability Toward Your Strategic Goals** with boardroom-quality dashboards & a comprehensive performance management framework.
- Providing **Reporting & Advanced Analytics**, that help empower smarter decision-making across all levels & functions.
- Deploying a Scalable Architecture For Wide-Scale, **Public-Facing Institutional Intelligence** Applications, such as interactive fact books.
- Delivering a **360-Degree View of Students**, faculty, & campuses by unifying diverse data sources

"We can now compare and communicate educational and administrative strategy, monitor and adjust the execution of limited budget dollars effectively, and gain real-time access to critical high-level summary information about the college."

– Bruce Austin

Houston Community College board member

Questions



Coming up on April 2

- Join us for Higher Education Virtual User Forum
 - Taylor University
 - “Student Success Insights From Predictive Analytics”
- Dr. Edwin Welch, Director of Institutional Research / Associate Registrar
 - Will present how predictive analytics is helping his Academic Enrichment Center make better use of its resources.
- He was also featured in an article in Information Week on January 28, “To Avoid Nasty Surprises, Higher Ed Turns to Prediction”



Thank you!

Information
Builders

Tim Beckett
Higher Education Solutions Manager

832-251-5702

Tim_Beckett@ibi.com

See white paper, video interviews, press releases & success stories at www.informationbuilders.com/highered